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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,470	01/06/2004	Yusuke Ishihara	Q79189	2344

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EXAMINER	
HAUGLAND, SCOTT J	
ART UNIT	**PAPER NUMBER**
3654	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/20/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/751,470	ISHIHARA ET AL.	
	Examiner	Art Unit	
	Scott Haugland	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-6, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 does not indicate with what the leg portions form right angles (see line 5).

Claim 4, lines 14-16 appears inaccurate because the reinforcement member in the lower case is under, not over a flange of the leader pin in the claimed orientation (note Fig. 8).

Claim 8 does not indicate with what the leg portions form right angles (see line 2).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, and 7 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,796,520 in view of the admitted prior art of Fig. 7A and page 17, line 18 through page 18, line 17 of the specification.

Claims 1-4 of U.S. Patent No. 6,796,520 do not include a tape leader pin length of 18.7 mm, a tape leader pin flange thickness of 1.1 mm, a cartridge case thickness of 1.38 mm above and below the leader pin flanges, or the clip being inserted into the upper and lower sidewalls perpendicular to the tape leader held in the upright state.

The admitted prior art teaches providing a tape cartridge with magnetic tape having a width of 14 mm and a leader pin having a length of 19.46 mm.

It would have been a matter of obvious engineering choice to make the leader pin 18.7 mm long and to make the cartridge case 1.38 mm thick above and below the flanges of the tape leader pin since it would have been a routine process well within the level of skill of an ordinary artisan to determine a suitable leader pin length and cartridge wall thickness to provide the desired overall dimensions of the cartridge and sufficient

cartridge strength, an 18.7 mm long leader pin being adequately long to accommodate conventional 14 mm wide tape.

With regard to claim 3, the U-shaped clip is near the tape leader opening since it is in the upper and lower cartridge cases. The leg portions of the clip would inherently be bent at right angles to a connecting plate portion because this is inherent in the U-shape of the clip. It would have been obvious to one having ordinary skill in the art to make the leg portions perpendicular to the tape leader pin in the upright state so that the clip is symmetrically located in the upper and lower cases to apply the same forces to both legs of the clip.

With regard to claim 7, it would have been a matter of obvious engineering choice to make the flanges of the tape leader pin 1.1 mm thick. Due to the predictability of the effects of various changes in the dimensions of tape cartridges and leader pin, it would have been clear to an ordinary artisan that an operable tape cartridge having a leader pin and cartridge case with the claimed dimensions could be constructed and would be useful for recording and reproducing data. No new and unexpected results are seen to have resulted from selection of a length of 18.7 mm for the leader pin, 1.1 mm for the flange thickness, or 1.38 mm for the cartridge case thickness.

Claim 2 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,796,520 in view of Ishihara et al (U.S. Pat. No. 6,663,036).

Claims 1-4 of U.S. Patent No. 6,796,520 do not include, as part of the leader-pin holding spring: a rectangular plate, a pair of elastic arms portions, and engagement recesses.

Ishihara et al teaches providing a spring with engagement recesses 9d in top and bottom edges of a rectangular mounting portion to secure the spring in the proper position when assembling the cartridge.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the leader pin holding spring of claims 1-4 of U.S. Patent No. 6,796,520 with engagement recesses in the top and bottom edges of the mounting portion of the spring as taught by Ishihara et al to secure the spring in position in the cartridge.

Claims 4-6 and 8 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,796,520 in view of Tanaka et al (U.S. Pat. No. 5,180,118).

Claims 1-4 of U.S. Patent No. 6,796,520 do not include metal reinforcement members embedded in the upper and lower cases over flanges of the tape leader pin and does not include the clip being inserted into the upper and lower sidewalls perpendicular to the tape leader held in the upright state.

Tanaka et al teaches forming a tape cartridge case by fastening upper and lower cases 3 (Figs. 13-18) of synthetic resin (col. 8, lines 1-2) together. Tanaka et al teaches providing the tape cartridge case with embedded reinforcement members 1, 2, 4, 26, 28

covering the entire interior of the cartridge to provide the cartridge case with rigidity and a low coefficient of friction (col. 7, lines 37-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the upper and lower cases of Morita of synthetic resin and provide it with embedded reinforcement members over the cartridge interior including opposite flanges of the tape leader pin as taught by Tanaka et al to provide a cartridge having high rigidity and having low friction surfaces for contact with tape recording devices. It would have been further obvious to make the reinforcement members of metal since an ordinary artisan would have known that metals would provide the disclosed properties of high rigidity and low friction coefficient and since the hatching of the reinforcement members 1, 2, 4 in Figs. 6-8 of Tanaka et al indicates a metal.

With regard to claim 6, the U-shaped clip is near the tape leader opening since it is in the upper and lower cartridge cases.

With regard to claim 8, the leg portions of the clip would inherently be bent at right angles to a connecting plate portion because this is inherent in the U-shape of the clip. It would have been obvious to one having ordinary skill in the art to make the leg portions perpendicular to the tape leader pin in the upright state so that the clip is symmetrically located in the upper and lower cases to apply the same forces to both legs of the clip.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita (European Patent Application No. 0 926 675) in view of Del Genio et al (U.S. Pat. No. 6,034,850) and the admitted prior art of Fig. 7A and page 17, line 18 through page 18, line 17 of the specification.

Morita discloses a magnetic tape cartridge comprising a cartridge case formed by fastening upper and lower cases together and having a tape leader opening, a single tape reel holding magnetic tape, a tape leader pin detachably held in an upright state between the upper and lower cases. The tape leader pin has axially opposite flanges.

Morita does not disclose that the upper and lower cases are made of synthetic resin, that the tape leader pin is 18.7 mm long, or that the thickness of the cartridge case thickness is 1.38 mm above and below the flanges of the tape leader pin. Morita does not disclose that the flanges are 1.1 mm thick as recited in claim 7.

Del Genio et al teaches forming cartridge cases of synthetic resin.

The admitted prior art teaches providing a tape cartridge with magnetic tape having a width of 14 mm and a leader pin having a length of 19.46 mm.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the upper and lower cases of Morita of synthetic resin as taught by Del Genio et al to form an inexpensive, non-magnetic housing for the magnetic tape.

It would have been a matter of obvious engineering choice to make the leader pin 18.7 mm long and to make the cartridge case 1.38 mm thick above and below the flanges of the tape leader pin since it would have been a routine process well within the level of skill of an ordinary artisan to determine a suitable leader pin length and cartridge wall thickness to provide the desired overall dimensions of the cartridge and sufficient cartridge strength, an 18.7 mm long leader pin being adequately long to accommodate conventional 14 mm wide tape.

With regard to claim 7, it would have been a matter of obvious engineering choice to make the flanges 1.1 mm thick. Due to the predictability of the effects of various changes in the dimensions of tape cartridges and leader pin, it would have been clear to an ordinary artisan that an operable tape cartridge having a leader pin and cartridge case with the claimed dimensions could be constructed and would be useful for recording and reproducing data. No new and unexpected results are seen to have resulted from selection of a length of 18.7 mm for the leader pin, 1.1 mm for the flange thickness, or 1.38 mm for the cartridge case thickness.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita in view of Del Genio et al and the admitted prior art as applied to claim 1 above, and further in view of Saito (U.S. Pat. No. 4,290,567).

Morita does not disclose engagement recesses in top and bottom edges of the mounting portion of the leader pin holding spring.

Saito teaches providing a spring with engagement recesses 135', 135" in top and bottom edges of a rectangular mounting portion to secure the spring when mounted in a cartridge case.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the leader pin holding spring of Morita with engagement recesses in the top and bottom edges of the mounting portion of the spring as taught by Saito to prevent shifting of the spring along its length when mounted in the cartridge.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita in view of Del Genio et al and the admitted prior art as applied to claim 1 above, and further in view of Ishihara et al (U.S. Pat. No. 6,663,036).

Morita does not disclose engagement recesses in top and bottom edges of the mounting portion of the leader pin holding spring.

Ishihara et al teaches providing a spring with engagement recesses 9d in top and bottom edges of a rectangular mounting portion to secure the spring in the proper position when assembling the cartridge.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the leader pin holding spring of Morita with engagement recesses in the top and bottom edges of the mounting portion of the spring as taught by Ishihara et al to secure the spring in the proper position when assembling the cartridge.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita (European Patent Application No. 0 926 675) in view of Tanaka et al (U.S. Pat. No. 5,180,118).

Morita is described above.

Morita does not disclose that the upper and lower cases are made of synthetic resin or that there is a metal reinforcing member embedded in one of the cases.

Tanaka et al teaches forming a tape cartridge case by fastening upper and lower cases 3 (Figs. 13-18) of synthetic resin (col. 8, lines 1-2) together. Tanaka et al teaches providing the tape cartridge case with embedded reinforcement members 1, 2, 4, 26, 28 covering the entire interior of the cartridge to provide the cartridge case with rigidity and a low coefficient of friction (col. 7, lines 37-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the upper and lower cases of Morita of synthetic resin and provide it with embedded reinforcement members over the cartridge interior including opposite flanges of the tape leader pin as taught by Tanaka et al to provide a cartridge having high rigidity and having low friction surfaces for contact with tape recording devices. It would have been further obvious to make the reinforcement members of

metal since an ordinary artisan would have known that metals would provide the disclosed properties of high rigidity and low friction coefficient and since the hatching of the reinforcement members 1, 2, 4 in Figs. 6-8 of Tanaka et al indicates a metal.

Response to Arguments

Applicants' arguments filed 10/6/06 have been fully considered but they are not persuasive.

In response to Applicants' argument concerning claim 1 that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The level of skill in the art was such that selection of the length of 18.7 for the leader pin and a thickness of 1.38 mm for the cartridge case would have been obvious to an ordinary artisan as clearly being capable of holding a tape of 14 mm which would be compatible with prior art reading mechanisms. An ordinary artisan would have been expected to perform routine experimentation to determine the optimal dimensions for the leader pin length and cartridge case thickness.

Applicants argue that neither Morita or Tanaka et al teach first and second metal reinforcement members embedded in upper and lower cases and disposed over axially

opposite flanges of the tape leader pin when the tape leader pin is detachably held in the upright state as recited in claim 4. However, the metal reinforcing members 1, 2, 4 (Figs. 13-18 of Tanaka et al) are over the entire take cartridge interior so that they provide rigidity to the whole cartridge. Applying this teaching to Morita would result in the claimed cartridge having reinforcing members over the flanges of the tape leader pin when it is positioned in the cartridge.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (571) 272-6945. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sjh
12/4/06

JOHN Q. NGUYEN
PRIMARY EXAMINER